YASHICA

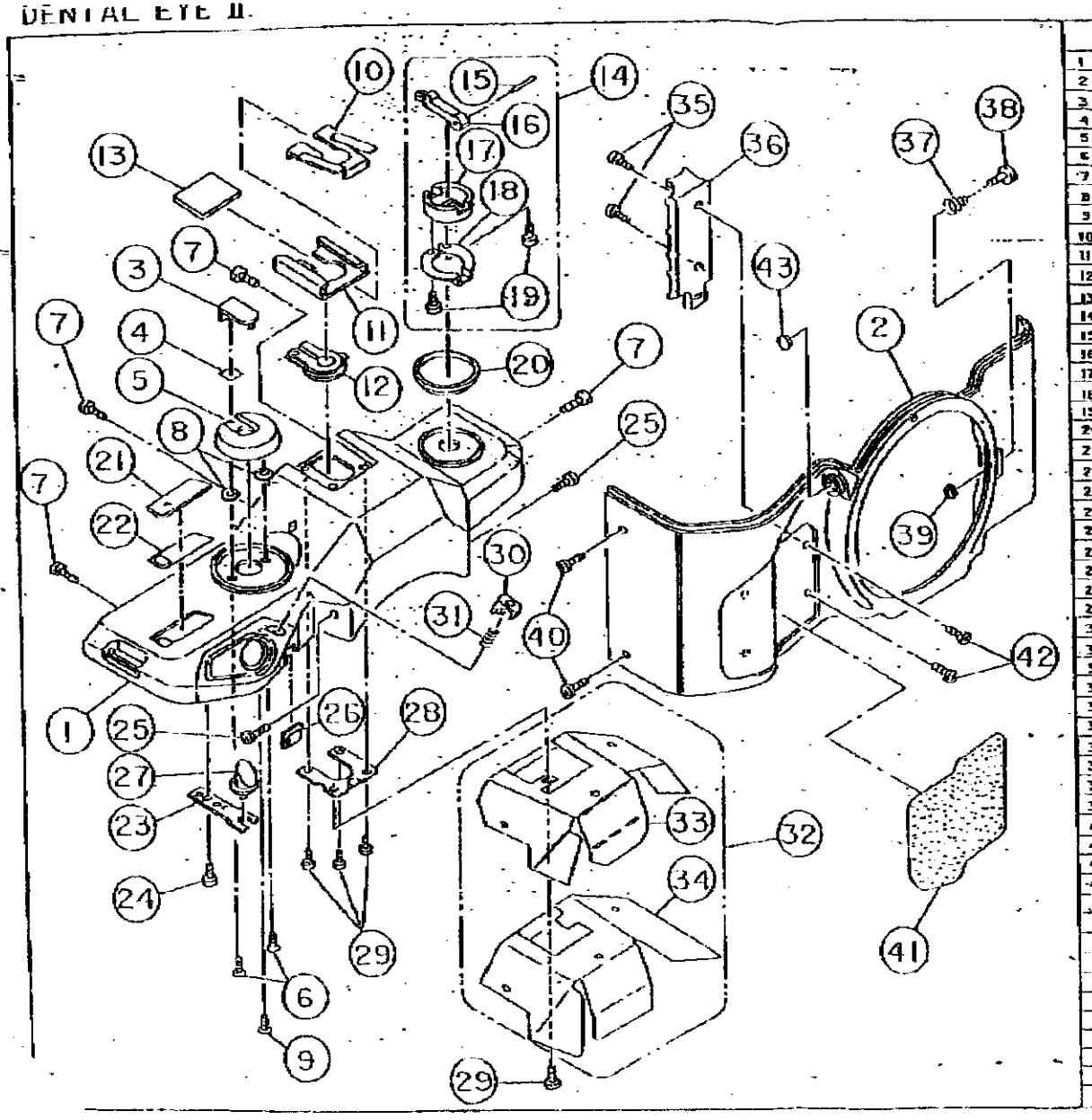
DENTAL-EYE II

ASSEMBLING CHART

KYOCERA CORPORATION

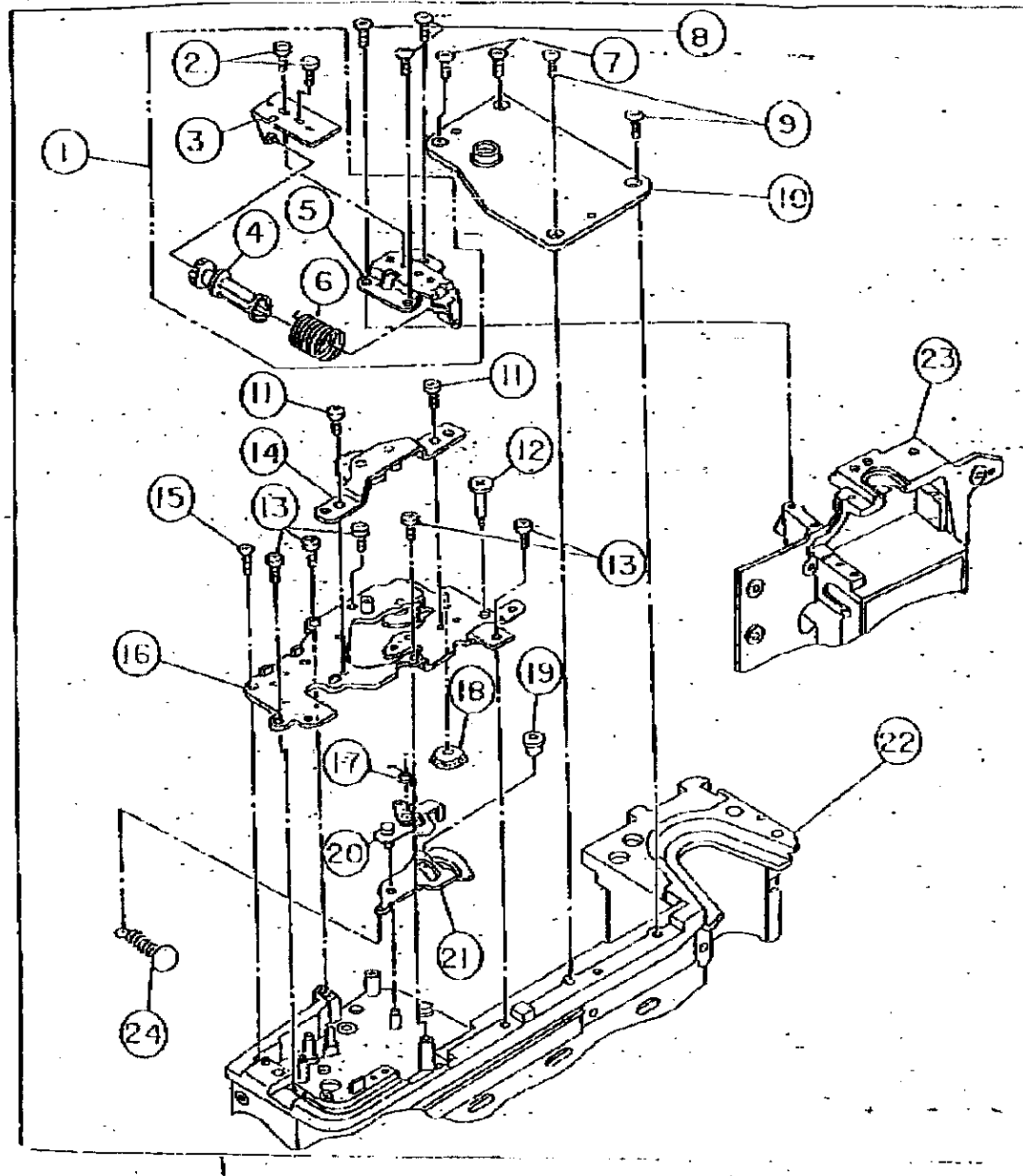
DENTAL EYE II.

No.1



	PARTS No.	DESCRIPTION	QTY
1	173271	TOP COVER (B)	1
2	A-173252-1	FRONT COVER (B) SUB-ASSY	1
3	173273	S DIAL PLATE (B)	1
4	173241	PLATE TAPE	1
5	173272	S DIAL (B)	1
6	69113086	TAP-TITE S.S	2
7	69113576	TAP-TITE S.S	4
8	69108026	WASHER	2
9	69115076	TAP-TITE S.S	1
10	173219	SHOE SPRING PLATE	1
11	173218	ACCESSORY SHOE	1
12	173A73	SHOE CONTACT ASSY	1
13	588205	SHOE INSULATION PLATE	1
14	173A78	REWIND KNOB ASSY	1
15	66670830	PARALLEL PIN	1
16	173A79	CRANK ARM ASSY	1
17	139368	REWIND KNOB	1
18	139373	CRANK ARM SPRING	1
19	69113076	TAP-TITE S.S	2
20	173214	KNOB RING	1
21	173208	C WINDOW	1
22	173217	C-TAPE	1
23	173216	RELEASE FIXER	1
24	69213076	TAP-TITE S.S	1
25	61196026	MACHINE S.S	2
26	173205	SELF WINDOW	1
27	173210	RELEASE BUTTON	1
28	173240	SHOE SUPPORTER	1
29	61313022	MACHINE S.S	4
30	173207	SELF BUTTON	1
31	173209	SELF BUTTON SPRING	1
32	173A72	SHIELD PLATE ASSY	1
33	173238	SHIELD PLATE	1
34	173239	SHIELD MYLAR	1
35	69214076	TAP-TITE S.S	2
36	173231	BATTERY HOLDER	1
37	173227	COMPENSATE BUTTON SPRING	1
38	173228	COMPENSATE BUTTON SPRING	1
39	66104225	E RING (E-10)	1
40	69109576	TAP-TITE S.S	2
41	173230	FRONT GUM	1
42	61917526	MACHINE S.S	2
43	588215	L LOCK BUTTON COVER	1
	A-173271-1	TOP COVER (B) SUB-ASSY	
	121,222,23		

DENTAL EYE II

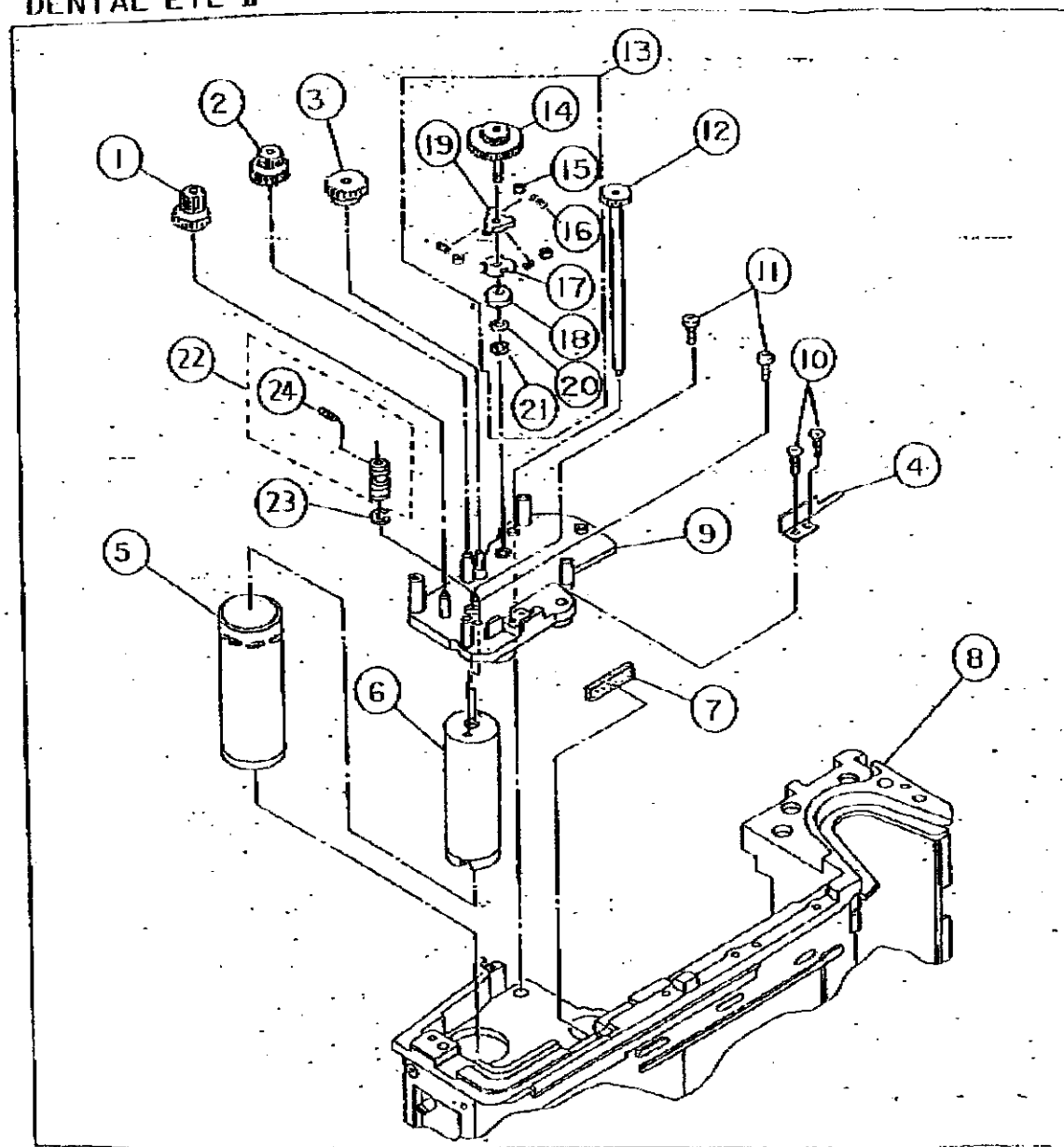


	PARTS No.	DESCRIPTION	QTY
1.	173A57	F GEAR ASS'Y	1
2	61912026	MACHINE S.S	2
3	173A58	F GEAR HOLDER LSI ASS'Y	1
4	168830	F GEAR	1
5	173A59	F GEAR HOLDER RD ASS'Y	1
6	168835	F GEAR SPRING	1
7	61823522	MACHINE S.S	2
8	61812526	MACHINE S.S	3
9	69323575	TAP-TITE S.S	2
10	173A21	TRIPOD SOCKET HOLDER ASS'Y	1
11	61912526	MACHINE S.S	2
12	168633	WINDING BASE PLATE SCREW	1
13	69113076	TAP-TITE S.S	5
14	173A25	WINDING BASE PLATE(L) ASS'Y	1
15	69313576	TAP-TITE S.S	1
16	173A24	WINDING BASE PLATE (R) ASS'Y	1
17	168644	RATCHET ARM SPRING	1
18	173672	B GEAR	1
19	168636	SECTOR FIXER	1
20	173A57	SECTOR DRIVING ARM ASS'Y	1
21	173639	SECTOR GEAR	1
22	173101	BODY	1
23	173701	MADX	1
24	168635	SECTOR GEAR SPRING	1
	173A22	WINDING BASE PLATE(R) ASS'Y	

FEB.24.2003 1:51PM YASHICA SERVICE NO.686 P.3/6

DENTAL EYE II

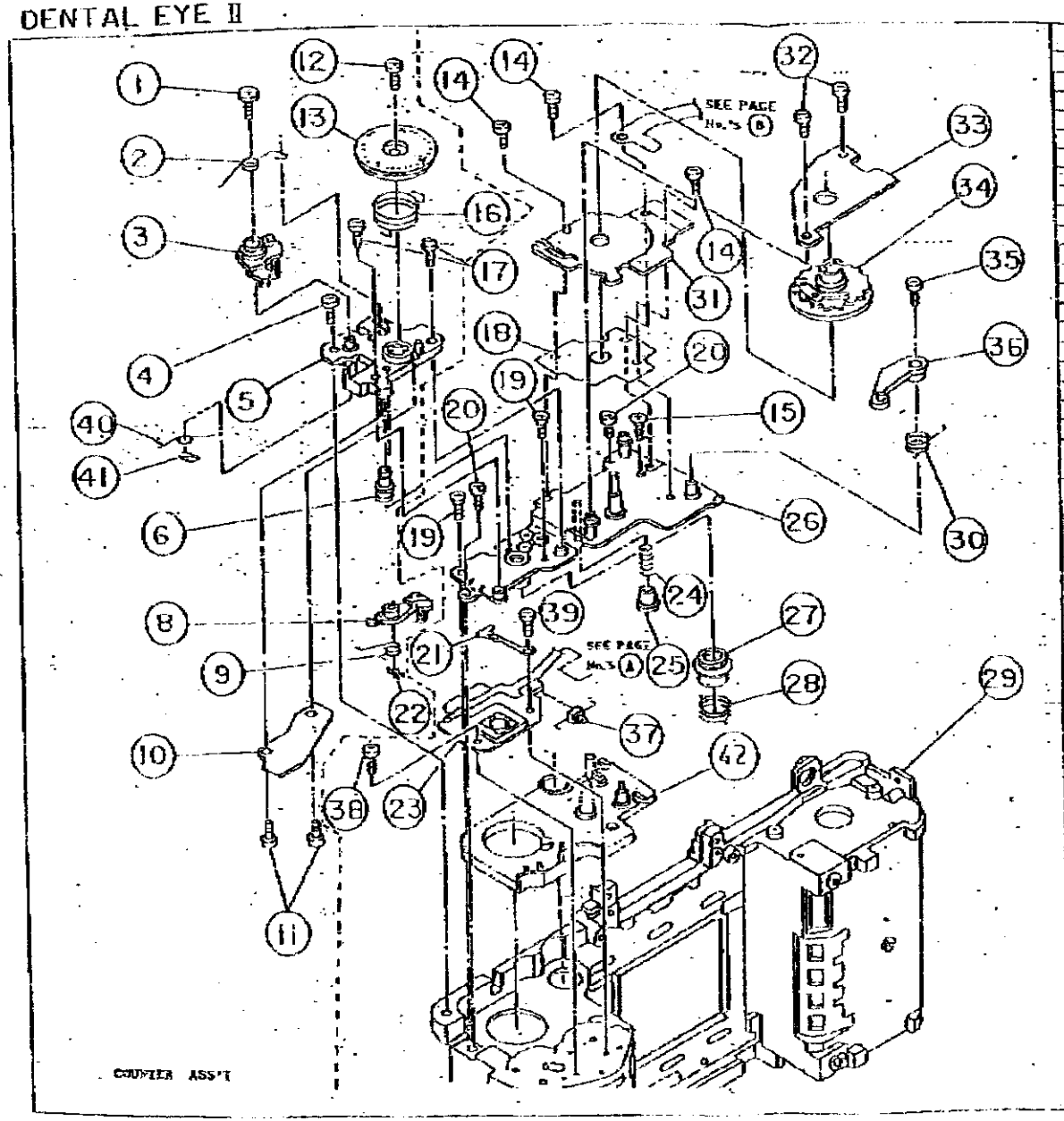
No. 3



	PARTS No.	DESCRIPTION	QTY
1	168624	GEAR 18	1
2	168625	GEAR 12	1
3	173A20	GEAR 36 ASS'Y	1
4	173645	SPROCKET RI SP PLATE	1
5	169A20	SPOOL ASS'Y	1
6	168696	MOTOR	1
7	173653	S MOQUETTE	1
8	173101	BODY	1
9	173A93	WINDING BASE PLATE R.A SUB-ASS'Y	1
10	69312576	TAP-TITE S.S	2
11	61913526	MACHINE S.S	2
12	168A88	W SHAFT ASS'Y	1
13	173A19	CLUTCH GEAR ASS'Y	1
14	173A95	CLUTCH GEAR SUB ASS'Y	1
15	137339	CLUTCH ROLLER	3
16	137340	ROLLER SPRING	3
17	137341	ROLLER HOLDER PLATE	1
18	168623	CLUTCH GEAR (L)	1
19	168694	CLUTCH	1
20	60301812	WASHER	1
21	66801223	E RING E-12R	1
22	173A16	MOTOR FRICTION ASS'Y	1
23	66109025	E RING (2-10)	1
24	69501626	SET SCREW	1
	173A23	WINDING BASE PLATE (RA) ASS'Y	
	C.9.11.22.	23.	

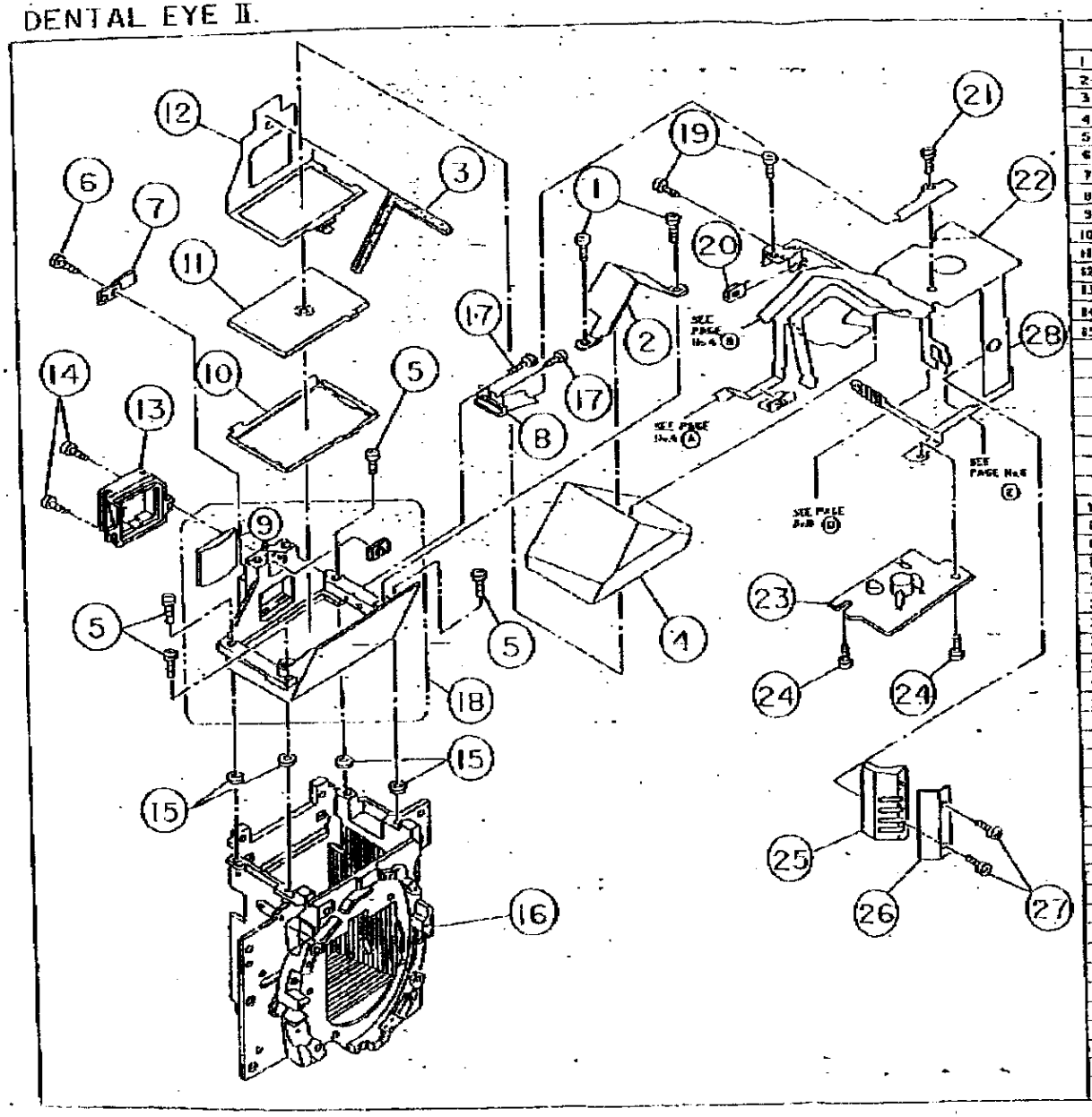
DENTAL EYE II

No.4



	PARTS No.	DESCRIPTION	QTY
1	66001004	SCREW	1
2	173425	C RELEASE SP (2)	1
3	173A36	C RELEASE LEVER ASS'Y	1
4	69214026	TAP-TITE S.S	1
5	173405	COUNTER INSTALL PLATE	1
6	173401	C GEAR (1)	1
7			
8	173407	C LEVER	1
9	173410	COUNTER SPRING (1)	2
10	173A01	C BOARD	1
11	69213076	TAP-TITE S.S	2
12	66001008	SCREW	1
13	173406	C GEAR (2)	1
14	61912526	MACHINE S.S	3
15	69313576	TAP-TITE S.S	1
16	173427	COUNTER SPRING (2)	1
17	61914526	MACHINE S.S	2
18	173428	S BOARD INSULATOR	1
19	69313576	TAP-TITE S.S	2
20	69213076	TAP-TITE S.S	2
21	173212	SELF CONTACT	1
22	66126087	GS RING (GS-15)	1
23	173211	RELEASE SWITCH ASS'Y	1
24	5400616	SPROCKET SPRING	1
25	173A56	A GEAR ASS'Y	1
26	173A31	WINDING BASE PLATE(B)ASS'Y	1
27	168659	SPOOL GEAR	1
28	168660	SPOOL FRICTION SP	1
29	173101	BODY	1
30	173424	S CLICK SPRING	1
31	173A38	S BOARD ASS'Y	1
32	61912526	MACHINE S.S	2
33	173422	R BOARD	1
34	173A40	S CLICK ASS'Y	1
35	66001010	SCREW	1
36	173A39	S CLICK LEVER ASS'Y	1
37	173413	LED	1
38	69212572	TAP-TITE S.S	1
39	69212572	TAP-TITE S.S	1
40	173404	C RELEASE LEVER SPRING	1
41	66122022	C RELEASE LEVER RS 20)	1
42	173A30	WINDING BASE PLATE (B) ASS'Y	1
	173A32	WINDING BASE PLATE (B) ASS'Y	
	173A35	COUNTER INSTALL PLATE ASS'Y	

DENTAL EYE II.



	PARTS No.	DESCRIPTION	QTY.
1	69214076	TAP-TITE S.S	2
2	168883	PENTA PRISM FIXER	1
3	147081	PENTA DUST-PROOF MOQUETTE	1
4	173703	PENTA PRISM	1
5	63914025	MACHINE S.S	4
6	69213076	TAP-TITE S.S	1
7	173705	SPD FIXER	1
8	173706	INDICATOR LED	1
9	173708	EYE-PIECE LENS	1
10	168880	PG HOLDER	1
11	173704	FOCUSING GLASS	1
12	173702	FINDER FRAME	1
13	173205	EYE-PIECE	1
14	69113576	TAP-TITE S.S	2
15		PENTA PRISM HOLDER ADJUST W	4
	60318017	WASHER T0.1	
	60321010	WASHER T0.2	
	60351015	WASHER T0.3	
	60341012	WASHER T0.4	
	60354010	WASHER T0.5	
	60367016	WASHER T0.6	
		14 PCS OF SAME THICKNESS TO	
		BE SELECTED IN USE.)	
16	173701	RUBOX	1
17	69702516	INDICATOR LED S.S	2
18	173A54	PENTA PRISM HOLDER SUB-ASS'Y	1
19	69213076	TAP-TITE S.S	2
20	169503	SPD 730AF	1
21	69216076	TAP-TITE S.S	1
22	173A64	FPC-ASS'Y	1
23	173510	DC-DC-CONVERTER	1
24	63913022	MACHINE S.S	2
25	173116	DX COVER	1
26	168317	DX LIGHT-PROOF PLATE	1
27	69114576	TAP-TITE S.S	2
28	173506	FPC-2	1
	173A53	PENTA PRISM HOLDER ASS'Y	

FEB.24.2003 1:53PM YASHICA SERVICE NO.686 P.5/6

KYOCERA CORPORATION

5-22 Kita Inoue-cho, Higashino, Yamashina-ku, Kyoto 607, Japan
Tel: (075) 592-3851 Telex: 5422-479 KCJPN J
Bioceram Division Tel: (075) 592-4456

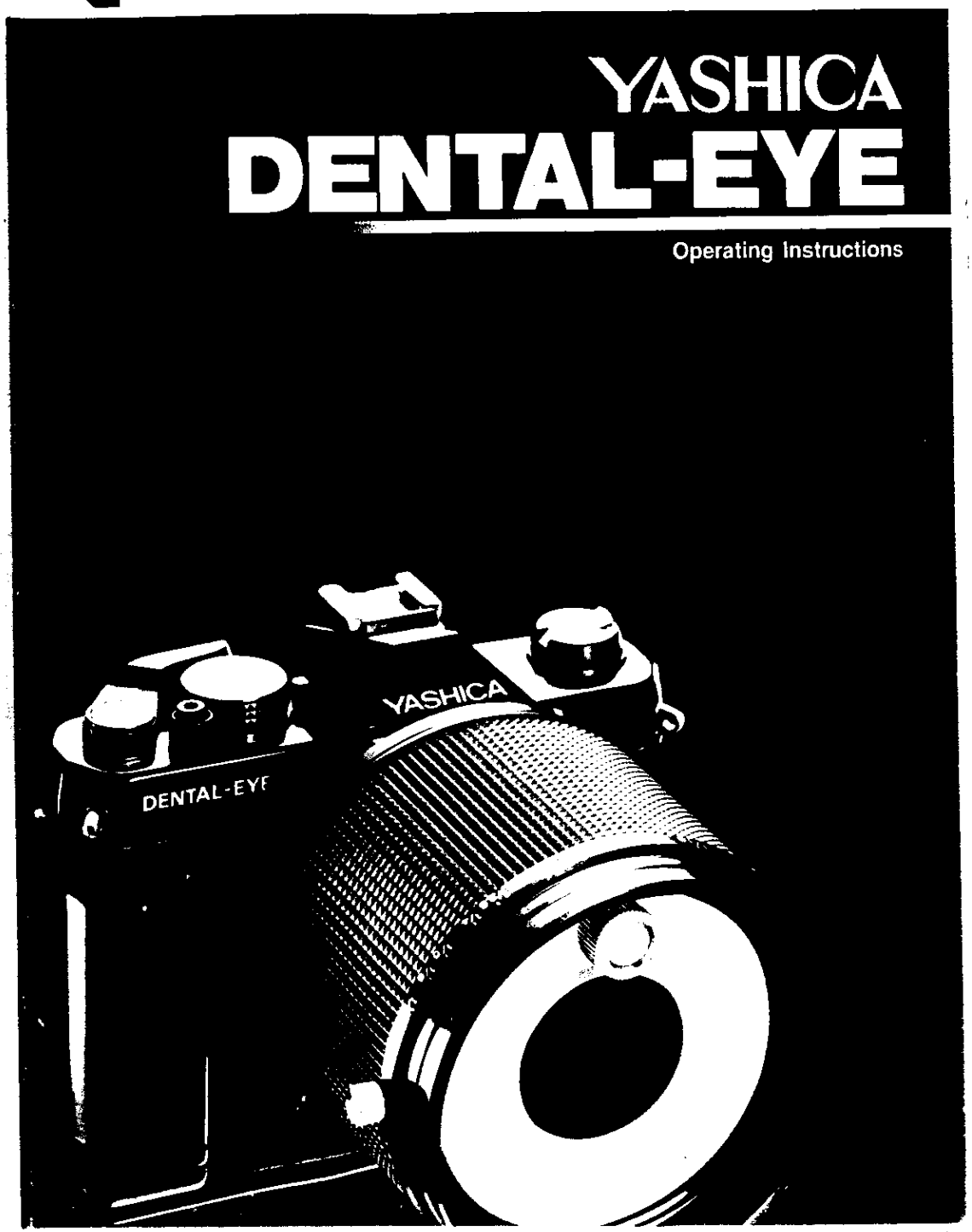
YASHICA DIVISION, TOKYO OFFICE
27-8, 6-chome, Jingumae, Shibuya-ku, Tokyo 150, Japan
Tel: (03) 400-1430
KYOCERA INTERNATIONAL, INC.
8611 Balboa Avenue, San Diego, California 92123, U.S.A.
Tel: (619) 576-2600
YASHICA INC., USA Main Office
411 Sette Drive, Paramus, New Jersey 07652, U.S.A.
Tel: (201) 262-7300
YASHICA INC., Midwestern Regional Office
120 King Street, Elk Grove Village, Illinois 60007, U.S.A.
Tel: (312) 640-6060
YASHICA INC. Western Regional Office
344 Mira Loma Avenue, Glendale, California 91204, U.S.A.
Tel: (213) 247-2140
YASHICA CANADA INC.
7470 Bath Road, Mississauga, Ontario, L4T 1L2, Canada
Tel: (416) 671-4300
YASHICA EUROPE GmbH
Billstraße 28, D-2000 Hamburg 28, West Germany
Tel: (040) 78 15 21/25
YASHICA DO BRASIL INDUSTRIA E COMERCIO LTDA.
Rua Cruz e Souza 59, Aclimacao, São Paulo, Brazil
Tel: 283-4244

H-8401010 Ⓟ Printed in Japan

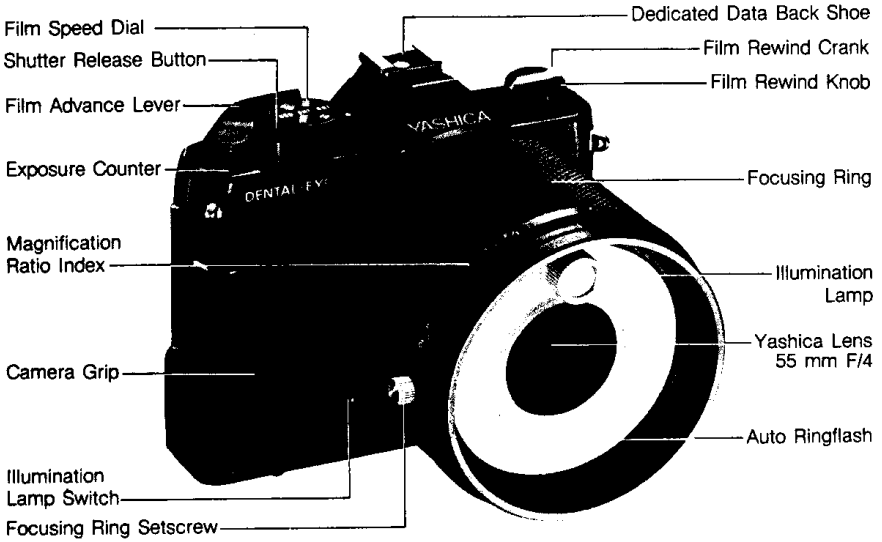
KYOCERA

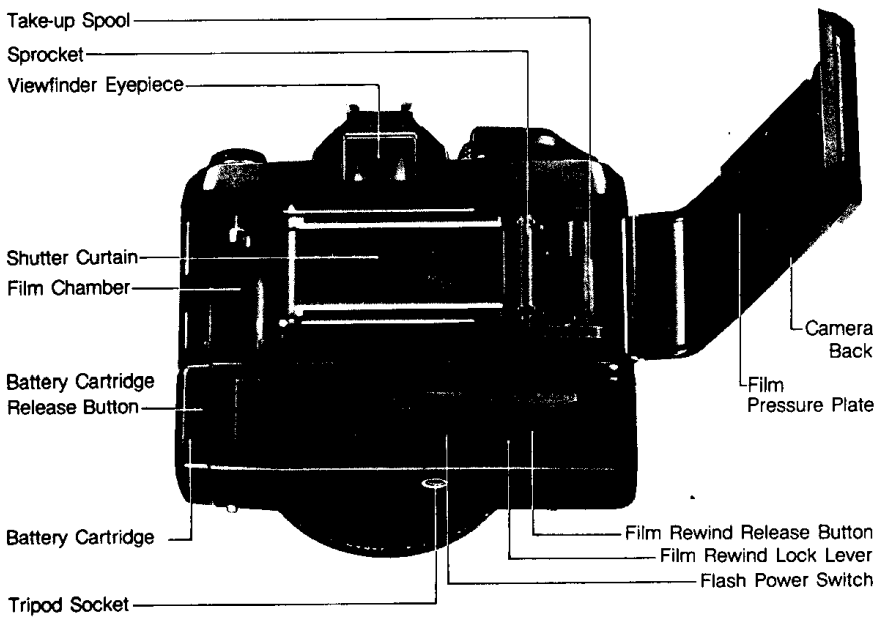
YASHICA DENTAL-EYE

Operating Instructions

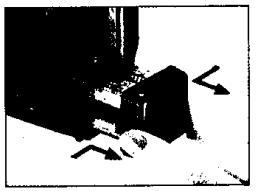


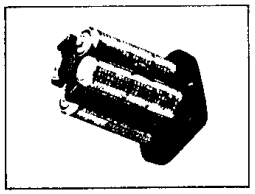
DESCRIPTION OF PARTS





1. Installing Batteries



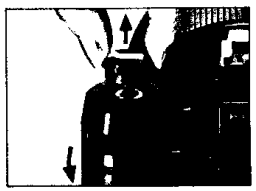


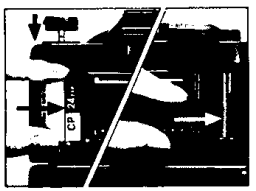
The auto ringflash unit is powered by four size AA battaries of the 1.5 V alkaline or manganese type or of the 1.2 V Ni-Cd type. The use of high performance alkaline batteries is recommended.

[1] To remove the battery cartridge, depress release buttons on opposite sides of the cartridge and draw out the cartridge at the same time.

[2] Install the four batteries correctly as shown by the etched (+) and (−) polarity marks. After installing the batteries, replace the battery cartridge by sliding it in until it snaps into place.

2. Film Loading



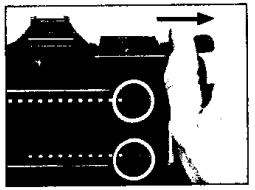


Use standard 35 mm cassette film.

[1] Lift the film rewind knob and then pull it up firmly until the camera back opens.

[2] Insert the film cassette into the film chamber and then push the rewind knob down to its original position. The knob will seat itself easily if it is turned back and forth slightly while being pushed down.

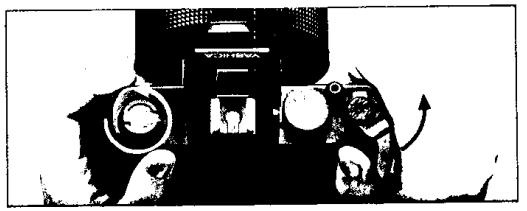
[3] Then insert the film tip into one of the slots on the take-up spool.



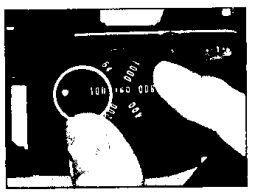
[4] Gently cock the film advance lever, winding on the film until the upper and lower rows of perforations mesh with their respective sprockets. After confirming that the film has meshed correctly, close the camera back.

[5] To eliminate any slack in the film, unfold the film rewind crank and gently turn it in direction of the arrow until it stops.

[6] Then make blank exposures by alternately cocking the film advance lever and releasing the shutter until the exposure counter registers "1", which is your starting point for shooting pictures. If the film rewind knob rotates as the film advance lever is being worked, it means the film is feeding properly.

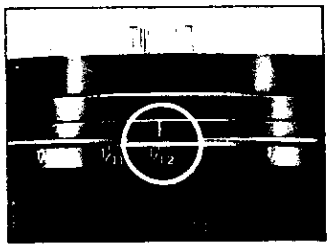


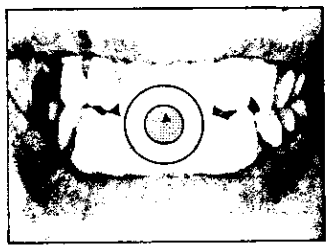
3. Setting the Film Speed



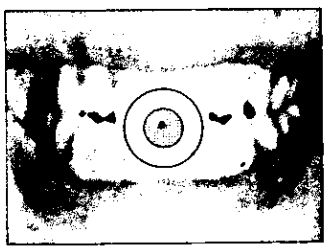
Turn the film speed dial until is it set at the speed rating (ISO) of the film in use. Set the dial precisely on the correct stop position. The film speed for the film in use is indicated on the side of the film box.

4. Focusing



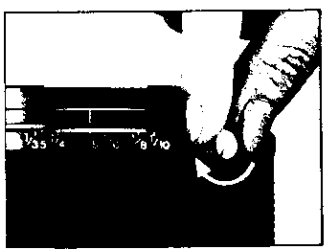


In Focus

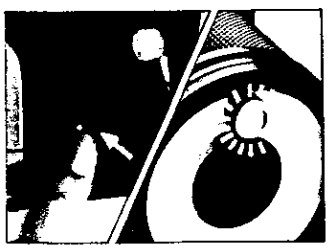


Out of Focus

While peering through the viewfinder, turn the focusing ring on the lens until the image in the microprism in center of the focusing screen or in the surrounding matte field appears sharp. If subject is out of focus, you will see a blurred image.
A manification ratio index along the front end of the focusing ring can be used to confirm the magnification ratio in effect for the object brought into focus. When a predetermined magnification ratio is desired, preset the focusing ring at the desired ratio and then focus by moving the camera back or forth in relation to the subject.
The magnification ratio indicates size of the subject image in relation to the negative area. The relationship between the shooting range and the lens barrel front-to-subject distance (working distance) is as shown in the table on reverse side.

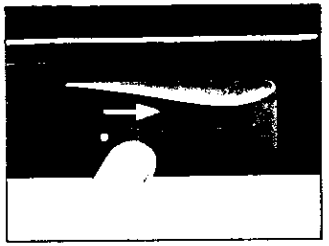


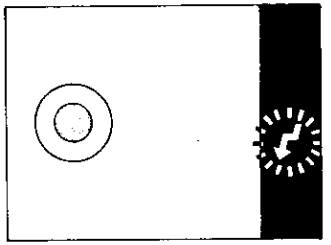
<Locking the Focusing Ring>
The focusing ring can be locked by turning the setscrew in the direction of arrow as far as it will go. Thus, it is very handy for photographing at a predetermined magnification ratio.



<Using the Illumination Lamp>
Use the illumination lamp when focusing difficulties are encountered inside the oral cavity or when there is low ambient light. This lamp can be turned on by pressing the white dot on the illumination lamp switch after sliding the flash power switch to ON.

5. Photographing Procedure



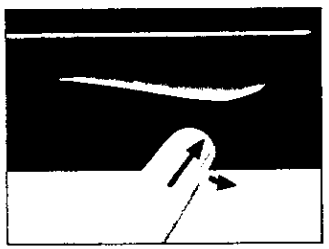


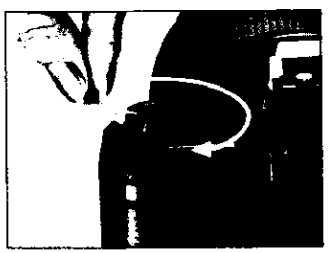
[1] When the flash power switch is turned ON, a green LED mark "⚡" will light up within a few seconds to indicate flash-ready status.

[2] Advance the film and focus on subject. Then press the shutter release button to fire the ringflash unit.

- When finished taking flash, turn off the flash power switch to conserve the batteries.
- Please note the when standard size prints are made from the exposed film, they may show somewhat less than that displayed in the negative area.

6. Film Rewinding





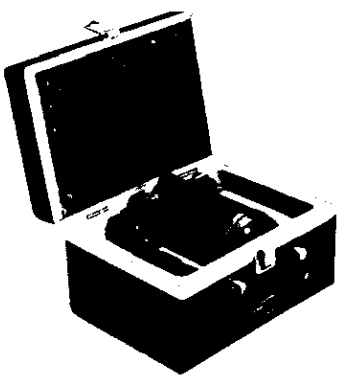
When the entire roll of film has been exposed, you will not be able to operate the film advance lever. Do not attempt to forcibly cock the lever. Instead, check the frame counter before rewinding the film.

[1] Turn the film rewind lock lever and then depress the film rewind release button. It is not necessary to hold the button down.

[2] Unfold the film rewind crank and turn it in the direction of arrow. The film will then be rewound back onto the film cassette. When resistance is gone and the rewind crank turns freely, open the camera back and remove the film.

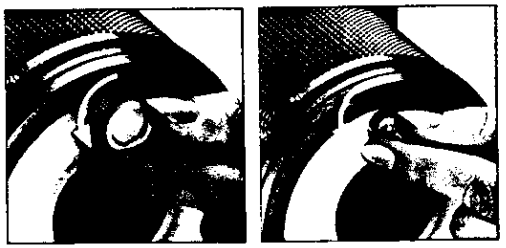
[3] Then refold the film rewind crank. Next turn film rewind lock lever back to its former position so as to prevent the film rewind release button from being accidentally depressed.

Dental Eye Kit Case
Specially designed carrying case or the Yashica Dental Eye. Camera is ready for instant use when taken out of the carrying case. Offers complete protection to camera when being carried around or in storage.



<Replacing the Illumination Lamp>

When the lamp fails, remove the lamp cover by turning it counterclockwise. Then remove the lamp by unscrewing it counterclockwise with your fingertips.
Take the defective lamp to your local electric shop and ask for a 6 V 3 W replacement lamp.



<Magnification Ratio and Related Data>

Magnification Ratio:	1/10	1/8	1/5	1/3	1/2	1/1.5	1/1
Picture-taking Area:	240×360 mm	192×288 mm	120×180 mm	72×108 mm	48×72 mm	36×54 mm	24×36 mm
Working Distance:	58.1 cm	47.5 cm	31.5 cm	21.8 cm	18 cm	17.1 cm	7.9 cm
Depth of Field:	−14 mm +15 mm	−11 mm +12 mm	−7 mm +7 mm	−4 mm +4 mm	−2.5 mm +2.5 mm	−2 mm +2 mm	−1 mm +1 mm

* Use the data as a general guideline.

<Battery Changing Time>

In the case of the Dental Eye, the recycling time (or the number of flashes) will vary with the film speed being selected. If the flash-ready lamp takes more than 15 seconds to light up (when set at ISO 100), it means the batteries are low. In this case, replace all four of the batteries with fresh ones of the same type. (Mixing of fresh and old batteries will shorten battery life.)

<Battery Precautions>

- When not using the camera for an extended period, remove the batteries before storing the camera.
- When exposed to cold temperatures, the batteries will perform less efficiently. When shooting in cold areas, either protect the batteries from the cold or keep a spare set warmed in your pocket before using them. As temperatures return to normal, the batteries will recover their usual capacity and become serviceable again.
- Stained or smudged batteri terminals can lead to poor electrical contact, so wipe the batteries clean with a piece of cloth before installing them.

<Camera Care>

- As it can have a damaging effect on the camera mechanism, avoid leaving the camera in extremely humid or hot areas such as at the seashore or in sun-bathed cars during hot summer months.
- Avoid abrupt changes in temperature, such as when suddenly entering a heated room from the cold outdoor, because can cause corrosion inducing condensation inside the camera.
- When the glass surfaces of the lens and viewfinder eyepiece are smeared with finger stains, do not attempt to wipe them off vigorously. Gently wipe them with a piece of cleaning tissue moistened with some lens cleaning solution. And use a blower brush to blow or lightly brush away dust from the glass surfaces.
- When the body surfaces need to be cleaned, wipe them with a soft cloth. Never use any solvent such as benzene or thinner.

Optional Accessories

Dental Eye 2X lens
A conversion lens which mounts over front rim of lens of the Yashica Dental Eye. Magnification ratio of 2:1 permits extra close-up work.

Dental Eye Data Back
Used by installing on the camera in place of the standard back. Recording of such data as magnification ratio and initial (two alphabetical characters) is coupled with shutter release system.

Dental Mirror
Designed for oral cavity use for photographing upper jaw dental arche and profile of premolars and true molars.

Dental Eye AC Adapter
Is used as an alternate power source for the flash unit by connecting to AC outlet.

SPECIFICATIONS

Type: 35 mm SLR featuring built-in electronic ringflash and a focal-plane shutter.
Image Size: 24 × 36 mm.
Film: Standard 35 mm film cassette of 12, 20, 24 and 36 exposure rolls.
Lens: Yashica Lens 55 mm F/4, 4 elements in 3 groups, with angular field of 43 degrees.
Shutter: Vertical travel type metal focal-plane shutter.
Shutter Speed: 1/60 sec.
ISO Film Speed Index: 64—100—200—400—800—1000.
Magnification Ratio Index: 1/1—1/1.1—1/1.2—1/1.5—1/1.8—1/2—1/2.5—1/3—1/3.5—1/4—1/5—1/6—1/8—1/10.
Picture-Taking Area: 24 × 36 ~ 240 × 360 mm.
Working Distance: 58.1 cm (1/10) ~ 7.9 cm (1/1).
Viewfinder: Pentaprism eyelevel type, with field showing 92% of picture area, and magnification of 0.91X.
Focusing Screen: Microprism type.
Viewfinder Display: Green LED flash-ready signal.
Film Advance: Lever type (130 degree setting angle, 20 degree rest).
Film Rewind: Rewind crank with rotary action.
Exposure Counter: Auto setting, additive type.
Camera Back: Hinged type, opened by lifting up film rewind knob.
Electronic Flash: Ring-shaped xenon discharge tube, flashmatic mechanism, minimum aperture of F/16.
Maximum Output: Approx. 7.3 W (ISO 64).
Maximum Guide Number: Approx. 3.8 (ISO 64/meters).
Recycling Interval: ISO 100
Manganese batteries: Approx. 4 sec.
Alkaline batteries: Approx. 2.5 sec.
Ni-Cd batteries: Approx. 2 sec.
Number of Flashes: ISO 100, recycling time under 15 sec.
Manganese batteries: Approx. 500 flashes.
Alkaline batteries: Approx. 1000 flashes.
Ni-Cd batteries: Approx. 300 flashes.
Power Source: Four AA type batteries, or Ni-Cd batteries.
Dimensions: 136 (W) × 120.5 (H) × 134 (D) mm.
Weight: 1,080 g (without batteries).

* *The above specifications and design are subject to change without notice.*